WHAT IS CLAIMED IS:

1. A surface acoustic wave device comprising:

a surface acoustic wave element including a piezoelectric substrate having interdigital electrodes and electrode pads thereon, the electrode pads being arranged to input and output electrical signals to and from the respective interdigital electrodes;

an electronic component package supporting the surface acoustic wave element, the electronic component package including electrode pattern sections arranged to input and output electrical signals; and

metal bump connections electrically connecting the electrode pads to the respective electrode pattern sections;

wherein the electrode pads include aluminum as a major component and copper as a minor component, the copper content being at least about 3.5 percent by weight.

2. The surface acoustic wave device according to claim 1, wherein the metal bump connections comprise one of elemental gold and an alloy including gold as the primary component.

3. The surface acoustic wave device according to claim 1, wherein the metal bump connections include a metal bump

disposed between each of the electrode pads and the corresponding electrode pattern section on the electronic component package.

4. The method for making the surface acoustic wave device according to claim 3, wherein the metal bump includes a semispherical main portion and a substantially perpendicular projection.

5. A communication apparatus comprising the surface acoustic wave device according to claim 1.

6. The surface acoustic wave device according to claim 1, wherein the copper content is in the range of about 3.5 to about 25 percent by weight.

7. The surface acoustic wave device according to claim 1, wherein the electrode pads include aluminum and copper, the copper content being in the range of about 3.5 to about 25 percent by weight.

8. The surface acoustic wave device according to claim 1, wherein the copper content is in the range of about 3.5 to about 18 percent by weight.

9. The surface acoustic wave device according to claim 1, further comprising:

intermediate electrodes and upper electrodes on the respective electrode pads;

wherein the intermediate electrodes are disposed between the respective electrode pads and the respective upper electrodes and include a material for enhancing the bonding strength therebetween, and the upper electrodes include a material for enhancing the bonding strength between the respective intermediate electrodes and the respective metal bump connections.

10. The surface acoustic wave device according to claim 1, wherein the electronic component package includes a bottom plate, a sidewall component, a cover and a cavity, the cavity accommodates the surface acoustic wave element therein and is surrounded by the bottom plate, the sidewall component and the cover.

11. The surface acoustic wave device according to claim 10, wherein the electrode pattern sections are provided on an inner surface of the bottom plate.

12. The surface acoustic wave device according to claim 10, wherein a plurality of external connection

terminals is provided on an outer surface of the bottom plate of the electronic component package, and each of the plurality of external connection terminals are electrically connected to respective electrode pattern sections.

13. The surface acoustic wave device according to claim 10, wherein the surface acoustic wave element is mounted face down in the electronic component package such that the interdigital electrodes face the bottom plate of electronic component package.

14. The surface acoustic wave device according to claim 10, wherein the surface acoustic wave element is spaced from the bottom plate of the electronic component by a gap.

15. The surface acoustic wave device according to claim 9, wherein the intermediate electrodes are made of NiCr.

16. The surface acoustic wave device according to claim 9, wherein the upper electrodes are made of one of elemental aluminum and an aluminum alloy.

17. The surface acoustic wave device according to

claim 1, wherein the electrode pattern sections are plated with gold.

18. A method for manufacturing a surface acoustic wave device comprising the steps of:

providing a piezoelectric substrate;

forming interdigital electrodes and electrode pads on the piezoelectric substrate to form a surface acoustic wave element, the electrode pads being arranged to input and output electrical signals to and from the respective interdigital electrodes;

disposing the surface acoustic wave element in an electronic component package including electrode pattern sections arranged to input and output electrical signals; and

forming metal bump connections so as to electrically connect the electrode pads to the respective electrode pattern sections;

wherein the electrode pads include aluminum as a major component and copper as a minor component, the copper content being at least about 3.5 percent by weight.

19. A method according to claim 18, further comprising the steps of sandwiching a metal bump between each electrode pad and the corresponding electrode pattern section on the

electronic component package and forming the corresponding metal bump connection with the metal bump by applying ultrasonic waves.

20. A method according to claim 19, further comprising the step of placing the metal bump on the corresponding electrode pad before said sandwiching step.

21. A method according to claim 19, further comprising the step of applying a substantially perpendicular load to the metal bumps.

22. A method according to claim 19, further comprising the step of applying heat that is lower than the soldering temperature to the metal bumps.